

July 2015

# First Bimonthly Report

Groundwater Monitoring Wells at the  
Luis Muñoz Marín International  
Airport (LMMIA)

**CARIBBEAN AIRPORT FACILITIES, INC.**

Ref.: 354-2015.07.01 1st Bimonthly Report CAF Monitoring Wells Sampling Report FOIA



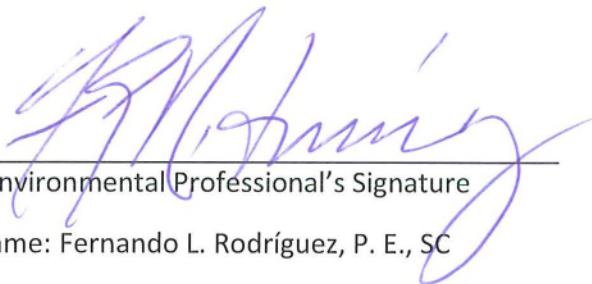
## EXECUTIVE SUMMARY

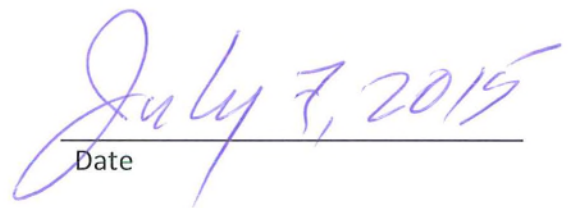
As part of the *Subsurface Investigation Plan* ("SIP"), developed on March 2012 to delineate the vertical and horizontal extent of subsurface contamination with jet fuel products in the soils and groundwater in the vicinity of the Caribbean Airport Facilities, Inc. (CAF) at the Luis Muñoz Marín International Airport (LMMIA), progressive reports are to be presented on a bimonthly basis to the U.S. EPA.

This report summarizes activities of groundwater level measurements performed after the installation of monitoring wells at LMMIA mainly in areas operated by CAF. First bimonthly report herein summarizes events documented until last Friday, June 26<sup>th</sup>, 2015.

### ***SIGNATURE OF ENVIRONMENTAL PROFESSIONAL***

A **Subsurface Investigation** effort was performed to identify any evident, current and/or potential, environmental contamination at the Luis Muñoz Marín International Airport (LMMIA) property lot, operated by Caribbean Airport Facilities, Inc. (CAF). This study was performed as per the request of **Mrs. Jean Tirri**, representing CAF.

  
\_\_\_\_\_  
Environmental Professional's Signature  
Name: Fernando L. Rodríguez, P. E., SC

  
\_\_\_\_\_  
Date

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Ref.: 354-76



# First Bimonthly Report

Groundwater Monitoring Wells at the Luis Muñoz Marín International Airport (LMMIA)

## 1.0 DAILY ACTIVITIES REPORTS

The following reports include relevant daily notes documented by the “CHES Services Corp. Team”. Historical weather data has been included for up to two (2) days prior to the groundwater level readings event, as provided by Weather Underground [1].

**Weather Station ID: ISANJUAN16**

In addition, observed water levels reported by NOAA’s Center for Operational Oceanographic Products and Services (CO-OPS) [2].

**NOAA/NOS/CO-OPS Station - San Juan, PR - Station ID: 9755371**

Established:	Mar 04, 1962
Time Meridian:	60° W
Present Installation:	Mar 25, 1989
Date Removed:	N/A
Water Level Max (ref MHHW):	2.77 Sep 18, 1989
Water Level Min (ref MLLW):	-1.09 Dec 20, 1968
Mean Range:	1.1 ft.
Diurnal Range:	1.58 ft.



# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

<b>Project:</b>	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
<b>Address:</b>	LMMIA	<b>Date:</b>	May 28, 2015

Phone:	787-751-7810	CHES Representative:	HRM/NDM	
Time	Location	Activity / Observations		
7:50	CAF1 & MW4	J&S and FLRA/CHES Personnel arrived		
8:00	MW4	GW level and GPS readings being performed		
8:20	MW1	GW level and GPS readings being performed		
8:40	MW8	GW level and GPS readings being performed		
8:50	MW3	GW level and GPS readings being performed		
8:50	MW3	8:50 to 8:56 path to MW6 obstructed and work to be performed on MW5		
8:56	MW3	Done performing work on MW3.		
8:57	MW5	Arrived to perform work		
9:01	MW5	MW5S - Has bottom cap installed, which is sealed with grout; no readings will be performed on this well today. J. Sierra to coordinate work.		
9:03	MW5	MW5D - filled with water passed the water-tight plug; work on evacuating water prior to uncapping well. A lot of sediment at bottom.		
9:13	MW5	Done performing work on MW5S.		
9:15	MW6	Arrived to perform work		
9:20	MW6	Done performing work on both wells at MW6.		
9:24	MW7	Arrived. Both wells are full of water passed the water-tight plug. Work on evacuating water prior to uncapping well.		
9:30	MW7	Ramón arrived. Will drive team over to MW11.		
9:35	MW7	Done at MW7		
9:39	MW11	Arrived at MW11 to perform work		
9:43	MW11	Done performing work at MW11		
9:46	MW10	Arrived at MW10 to perform work		
9:50	MW10	Done performing work at MW10		
9:53	MW9	Arrived at MW9 to perform work		
9:57	MW9	Done performing work at MW9		
10:10	CAF1	Returned N.Diaz's visitor's pass to Amy (CAF). J. Sierra signed off		
10:15	CAF1	Left 2 Deionized water gallons at "project's headquarters"		
10:30	CAF1	FLRA/CHES Team signed off		
Moving Forward (Next Steps)				
Action Item		Deadline	%Completion	Responsible Party
Eliminate "bottom cap" incorrectly placed on top of MW7S and replace with "plug".		ASAP	0%	J&S
Coordinate following week's work. Announced via e-mail to Aerostar the official day for these events: Thursdays		May 28, 2015	25%	FLRA/J&S



# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	May 28, 2015

Weather History				Special Comments		
Two (2) days prior to sampling event						
Tuesday, May 26, 2015				N/A		
« Previous Day					Next Day »	
Daily	Weekly	Monthly	Custom			
			Actual		Average	Record
Temperature						
Mean Temperature			28 °C		28 °C	
Max Temperature			30 °C		31 °C	34 °C [2005]
Min Temperature			25 °C		25 °C	21 °C [1911]
Degree Days						
Heating Degree Days			0		0	
Month to date heating degree days			0		0	
Since 1 July heating degree days			0		0	
Cooling Degree Days			17		18	
Month to date cooling degree days			480		434	
Year to date cooling degree days			2253		2075	
Growing Degree Days			32 [Base 50]			
Moisture						
Dew Point			23 °C			
Average Humidity			75			
Maximum Humidity			88			
Minimum Humidity			61			
Precipitation						
Precipitation			0.00 mm		4.57 mm	68.58 mm [1992]
Month to date precipitation			1.30		5.01	
Year to date precipitation			12.41		17.79	
Ref: Weather Underground						
Weather History				Special Comments		
One (1) day prior to sampling event						
Wednesday, May 27, 2015				N/A		
« Previous Day					Next Day »	
Daily	Weekly	Monthly	Custom			
			Actual		Average	Record
Temperature						
Mean Temperature			28 °C		28 °C	
Max Temperature			30 °C		31 °C	35 °C [1983]
Min Temperature			25 °C		25 °C	20 °C [1957]
Degree Days						
Heating Degree Days			0		0	
Month to date heating degree days			0		0	
Since 1 July heating degree days			0		0	
Cooling Degree Days			17		18	
Month to date cooling degree days			497		452	
Year to date cooling degree days			2270		2093	
Growing Degree Days			32 [Base 50]			
Moisture						
Dew Point			22 °C			
Average Humidity			75			
Maximum Humidity			88			
Minimum Humidity			61			
Precipitation						
Precipitation			0.25 mm		4.57 mm	4.80 mm [1952]
Month to date precipitation			1.31		5.19	
Year to date precipitation			12.42		17.97	
Ref: Weather Underground						



# Daily Activities

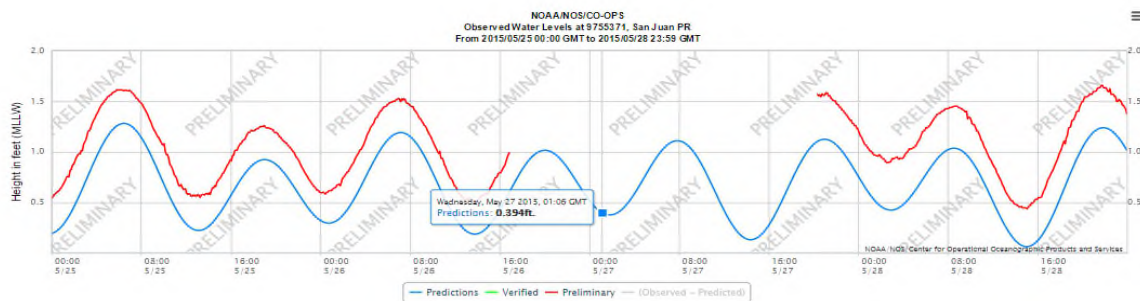
Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	May 28, 2015

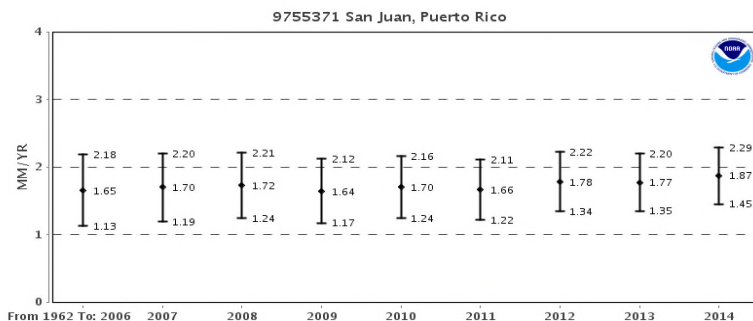
Weather History					
Day of sampling event			Special Comments		
Thursday, May 28, 2015					
« Previous Day			Next Day »		
Daily	Weekly	Monthly	Custom		
			Actual	Average	Record
Temperature					
Mean Temperature			28 °C	28 °C	
Max Temperature			32 °C	31 °C	33 °C [1990]
Min Temperature			25 °C	25 °C	19 °C [1929]
Degree Days					
Heating Degree Days			0	0	
Month to date heating degree days			0	0	
Since 1 July heating degree days			0	0	
Cooling Degree Days			18	18	
Month to date cooling degree days			515	470	
Year to date cooling degree days			2288	2111	
Growing Degree Days			33 [Base 50]		
Moisture					
Dew Point			22 °C		
Average Humidity			69		
Maximum Humidity			82		
Minimum Humidity			55		
Precipitation					
Precipitation			T mm	4.57 mm	10.34 mm [1956]
Month to date precipitation			1.31	5.37	
Year to date precipitation			12.42	18.15	

Ref: Weather Underground

Water Levels	
Two (2) days prior to sampling event until day of sampling event	



## Previous Mean Water Level Trends







# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associate.  
Chemical/Environmental Engineering & Industrial Hygiene Consultant:  
[www.flraches.com](http://www.flraches.com)

<b>Project:</b>	CAF Groundwater Monitoring Wells		
<b>Address:</b>	LMMIA	<b>Date:</b>	May-15

## Weather History

### Climatological Data for SAN JUAN L M MARIN AP, PR - May 2015

Click column heading to sort ascending, click again to sort descending.

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2015-05-01	93	76	84.5	3.5	0	20	0.00	0.0	0
2015-05-02	93	76	84.5	3.4	0	20	0.00	0.0	0
2015-05-03	93	76	84.5	3.4	0	20	T	0.0	0
2015-05-04	91	77	84.0	2.8	0	19	0.00	0.0	0
2015-05-05	89	76	82.5	1.2	0	18	0.00	0.0	0
2015-05-06	91	77	84.0	2.7	0	19	0.00	0.0	0
2015-05-07	93	76	84.5	3.1	0	20	0.00	0.0	0
2015-05-08	92	77	84.5	3.1	0	20	0.00	0.0	0
2015-05-09	91	76	83.5	2.0	0	19	0.07	0.0	0
2015-05-10	90	78	84.0	2.5	0	19	0.01	0.0	0
2015-05-11	89	78	83.5	1.9	0	19	0.00	0.0	0
2015-05-12	88	77	82.5	0.9	0	18	0.02	0.0	0
2015-05-13	91	77	84.0	2.3	0	19	0.00	0.0	0
2015-05-14	88	76	82.0	0.2	0	17	0.00	0.0	0
2015-05-15	88	76	82.0	0.2	0	17	0.02	0.0	0
2015-05-16	88	76	82.0	0.1	0	17	0.11	0.0	0
2015-05-17	87	76	81.5	-0.4	0	17	0.04	0.0	0
2015-05-18	88	76	82.0	0.0	0	17	T	0.0	0
2015-05-19	88	76	82.0	-0.1	0	17	0.00	0.0	0
2015-05-20	88	76	82.0	-0.1	0	17	1.01	0.0	0
2015-05-21	91	76	83.5	1.3	0	19	0.00	0.0	0
2015-05-22	91	79	85.0	2.7	0	20	0.00	0.0	0
2015-05-23	89	78	83.5	1.2	0	19	T	0.0	0
2015-05-24	88	78	83.0	0.6	0	18	0.00	0.0	0
2015-05-25	88	77	82.5	0.1	0	18	0.02	0.0	0
2015-05-26	86	77	81.5	-1.0	0	17	0.00	0.0	0
2015-05-27	86	77	81.5	-1.1	0	17	0.01	0.0	0
2015-05-28	89	77	83.0	0.4	0	18	T	0.0	0
2015-05-29	87	77	82.0	-0.7	0	17	0.51	0.0	0
2015-05-30	87	76	81.5	-1.2	0	17	0.05	0.0	0
2015-05-31	90	78	84.0	1.2	0	19	0.41	0.0	0
<b>Sum</b>	2771	2379	-	-	0	568	2.28	0.0	-
<b>Average</b>	89.4	76.7	83.1	1.2	-	-	-	-	0.0
<b>Normal</b>	87.5	76.3	81.9	-	0	524	5.90	0.0	-

Ref: NOAA NWSF; NOWData - NOAA Online Weather Data; San Juan LMMIA Station



# Daily Activities

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[www.flraches.com](http://www.flraches.com)

<b>Project:</b>	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
<b>Address:</b>	LMMIA	<b>Date:</b>	June 4, 2015

Phone:	787-751-7810	CHES Representative:	HRM/NDM	
Time	Location	Activity / Observations		
7:30	CAF1	J&S Personnel arrived		
7:45	CAF1	J&S and FLRA/CHES Personnel met; receipt of Visitor's passes.		
8:10	MW2	GW level and GPS readings (Elevation)		
8:20	MW2	Done		
8:30	MW4	GW level and GPS readings (Elevation)		
8:40	MW4	Done		
8:45	MW1	GW level and GPS readings (Elevation)		
8:50	MW1	Done		
8:55	MW8	GW level and GPS readings (Elevation)		
9:05	MW8	Done		
9:15	MW7	Arrived to perform work		
9:22	MW7	Done performing work		
9:26	MW5	Arrived. Both wells are full of water passed the water-tight plug. Work on evacuating water prior to uncapping well.		
9:34	MW5	Done performing work		
9:35	MW3	Arrived to perform work		
9:42	MW3	Done performing work		
9:44	MW6	Arried to performing work		
9:52	MW6	Done		
10:11	MW11	Arrived to perform work. Walk to the area MW11.		
10:17	MW11	Done performing work		
10:30	MW10	Arrived to perform work		
10:35	MW10	Done performing work		
10:37	MW9	Arrived to perform work (UPS equipment was parked right above MW9S; team was able to work around parked equipment)		
10:45	MW9	Done		
11:00	CAF1	Team signed-off		
Moving Forward (Next Steps)				
Action Item		Deadline	%Completion	Responsible Party
Eliminate "bottom cap" incorrectly placed on top of MW7S and replace with "plug".		ASAP	100%	J&S
Coordinate following week's work. Announced via e-mail to Aerostar the official day for these events: Thursdays.		May 28, 2015	100%	FLRA/J&S





# Daily Activities

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Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 4, 2015

Weather History				Special Comments
Two (2) days prior to sampling event				
Tuesday, June 2, 2015				N/A
« Previous Day				
Next Day »				
Daily	Weekly	Monthly	Custom	
Actual				
Average				
Record				
Temperature				
Mean Temperature				
28 °C				
28 °C				
Max Temperature				
31 °C				
32 °C				
35 °C [1980]				
Min Temperature				
26 °C				
25 °C				
21 °C [1957]				
Degree Days				
Heating Degree Days				
0				
0				
Month to date heating degree days				
0				
0				
Since 1 June heating degree days				
0				
0				
Since 1 July heating degree days				
Cooling Degree Days				
18				
18				
Month to date cooling degree days				
37				
36				
Year to date cooling degree days				
2378				
2201				
Since 1 June cooling degree days				
37				
36				
Growing Degree Days				
32 [Base 50]				
Moisture				
Dew Point				
24 °C				
Average Humidity				
83				
Maximum Humidity				
91				
Minimum Humidity				
74				
Precipitation				
Precipitation				
2.54 mm				
4.32 mm				
5.49 mm [1947]				
Month to date precipitation				
0.10				
0.34				
Ref: Weather Underground				

Weather History				Special Comments
One (1) day prior to sampling event				
Wednesday, June 3, 2015				N/A
« Previous Day				
Next Day »				
Daily	Weekly	Monthly	Custom	
Actual				
Average				
Record				
Temperature				
Mean Temperature				
28 °C				
28 °C				
Max Temperature				
31 °C				
32 °C				
34 °C [1993]				
Min Temperature				
25 °C				
25 °C				
21 °C [1955]				
Degree Days				
Heating Degree Days				
0				
0				
Month to date heating degree days				
0				
0				
Since 1 June heating degree days				
0				
0				
Since 1 July heating degree days				
Cooling Degree Days				
18				
18				
Month to date cooling degree days				
55				
54				
Year to date cooling degree days				
2396				
2219				
Since 1 June cooling degree days				
55				
54				
Growing Degree Days				
32 [Base 50]				
Moisture				
Dew Point				
24 °C				
Average Humidity				
82				
Maximum Humidity				
94				
Minimum Humidity				
70				
Precipitation				
Precipitation				
1.78 mm				
4.32 mm				
6.96 mm [2009]				
Month to date precipitation				
0.17				
0.51				
Year to date precipitation				
13.56				
19.19				
Ref: Weather Underground				

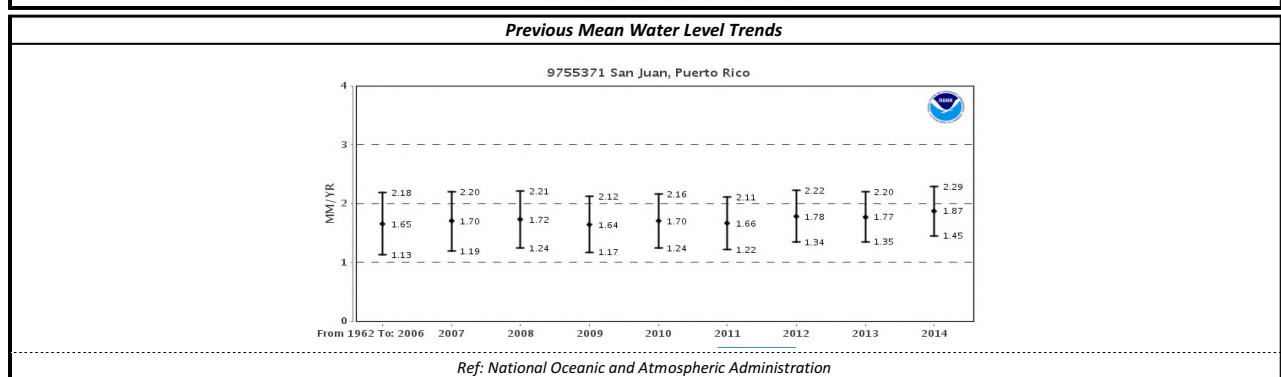
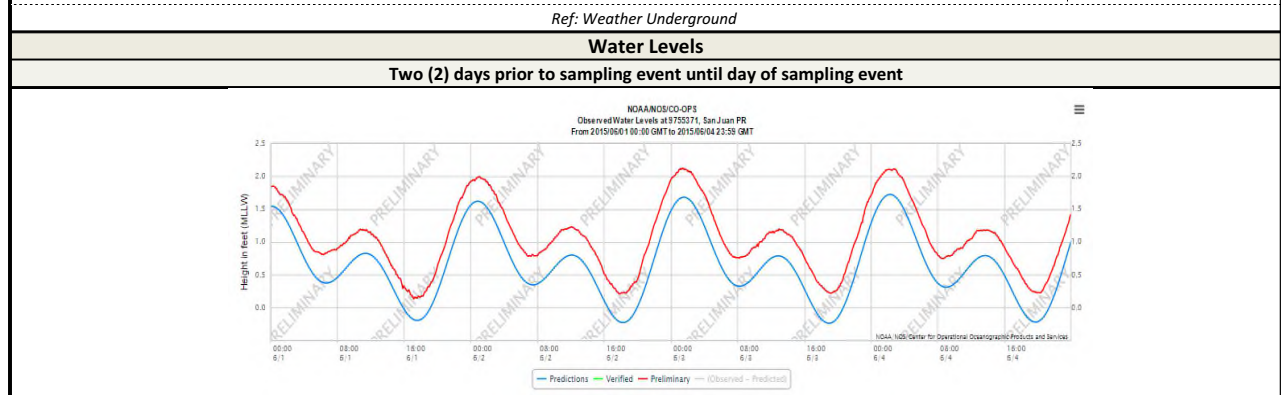


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Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 4, 2015

Weather History			
Day of sampling event			Special Comments
Thursday, June 4, 2015			
« Previous Day		Next Day »	
Daily	Weekly	Monthly	Custom
	Actual	Average	Record
Temperature			
Mean Temperature	29 °C	28 °C	
Max Temperature	32 °C	32 °C	33 °C [1993]
Min Temperature	25 °C	25 °C	21 °C [2011]
Degree Days			
Heating Degree Days	0	0	
Month to date heating degree days	0	0	
Since 1 June heating degree days	0	0	
Since 1 July heating degree days	0	0	
Cooling Degree Days	19	18	
Month to date cooling degree days	74	72	
Year to date cooling degree days	2415	2237	
Since 1 June cooling degree days	74	72	
Growing Degree Days	34 [Base 50]		
Moisture			
Dew Point	23 °C		
Average Humidity	74		
Maximum Humidity	91		
Minimum Humidity	56		
Precipitation			
Precipitation	0.00 mm	4.06 mm	4.57 mm [1957]
Month to date precipitation	0.17	0.67	
Year to date precipitation	13.56	19.35	
Brief cloudy moments; no precipitation during GW level readings activity.			
Ref: Weather Underground			



Ref: National Oceanic and Atmospheric Administration



# Daily Activities

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<b>Project:</b>	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
<b>Address:</b>	LMMIA	<b>Date:</b>	June 11, 2015

Phone:	787-751-7810	CHES Representative:	CFS	
Time	Location	Activity / Observations		
7:30	CAF1	CHES Personnel arrived		
7:45	MW4	J&S Personnel arrived		
8:00	MW4	J&S and CHES Personnel met; receipt of Visitor's pass.		
8:00	MW4	GW level readings (Elevation)		
8:10	MW4	Done   J&S was unable to open MW4D manhole, team must come back with 9/16" socket later.		
8:13	MW2	GW level readings (Elevation)		
8:20	MW2	Done		
8:21	MW1	GW level readings (Elevation) - Scattered Showers		
8:40	MW1	Done		
9:00	MW8	GW level readings (Elevation)		
9:10	MW8	Done		
9:15	MW7	GW level readings (Elevation)   Arrived. Both wells are full of water passed the water-tight plug. Work on evacuating water prior to uncapping well.		
9:25	MW7	Done performing work		
9:30	MW5	GW level readings (Elevation)		
9:39	MW5	Done performing work		
9:41	MW6	GW level readings (Elevation)		
9:48	MW6	Done performing work		
9:50	MW9	GW level readings (Elevation)   (UPS equipment was parked right above MW9S; team was able to work around parked equipment)		
10:00	MW9	Done		
10:08	MW10	GW level readings (Elevation)		
10:27	MW10	Done performing work   Team was able to complete the work after moderate rain		
10:50	MW3	Done performing work		
11:12	MW11	Arrived to perform work [GW level readings (Elevation)]. Walk to the area MW11.		
11:16	MW11	Done performing work		
11:50	MW4	GW level readings at MW4D		
11:56	MW4	Done		
12:00	CAF1	Team signed-off		
Moving Forward (Next Steps)				
Action Item		Deadline	%Completion	Responsible Party
Coordinate following week's work. Announced via e-mail to Aerostar the official day for these events: Thursdays.		June 17, 2015	25%	FLRA/J&S



# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 11, 2015

Weather History							Special Comments	
Two (2) days prior to sampling event								
Martes, Junio 9, 2015							N/A	
« Previous Day								Next Day »
Daily	Weekly	Monthly	Custom		Actual	Average		Record
Temperature								
Temperatura media					29 ° C	28 ° C		
Temperatura máxima					32 ° C	32 ° C		34 ° C [1988]
Temperatura mínima					26 ° C	26 ° C		21 ° C [1902]
Degree Days								
Grados día de calefacción					0	0		
Month to date heating degree days					0	0		
Since 1 June heating degree days					0	0		
Since 1 July heating degree days					0	0		
Cooling Degree Days					19	18		
Month to date cooling degree days					175	162		
Year to date cooling degree days					2516	2327		
Since 1 June cooling degree days					175	162		
Growing Degree Days					34 [Base 50]			
Moisture								
Punto de rocío					23 ° C			
Average Humidity					72			
Maximum Humidity					85			
Minimum Humidity					59			
Precipitación								
Precipitación					0.00 mm	4.06 mm	5.00 mm [2004]	
Month to date precipitation					0.17	1.48		
Year to date precipitation					13.56	20.16		
Ref: Weather Underground								

Weather History							Special Comments	
One (1) day prior to sampling event								
Miércoles, Junio 10, 2015							N/A	
« Previous Day								Next Day »
Daily	Weekly	Monthly	Custom		Actual	Average		Record
Temperature								
Temperatura media					28 ° C	28 ° C		
Temperatura máxima					31 ° C	32 ° C		35 ° C [1982]
Temperatura mínima					26 ° C	26 ° C		21 ° C [1957]
Degree Days								
Grados día de calefacción					0	0		
Month to date heating degree days					0	0		
Since 1 June heating degree days					0	0		
Since 1 July heating degree days					0	0		
Cooling Degree Days					18	18		
Month to date cooling degree days					193	180		
Year to date cooling degree days					2534	2345		
Since 1 June cooling degree days					193	180		
Growing Degree Days					33 [Base 50]			
Moisture								
Punto de rocío					23 ° C			
Average Humidity					77			
Maximum Humidity					91			
Minimum Humidity					63			
Precipitación								
Precipitación					1.02 mm	3.81 mm	3.15 mm [2004]	
Month to date precipitation					0.21	1.63		
Year to date precipitation					13.60	20.31		
Ref: Weather Underground								

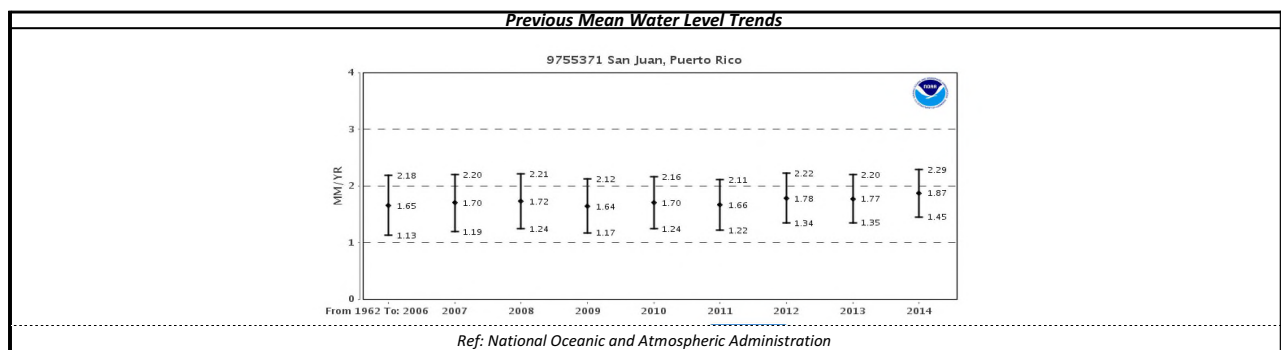
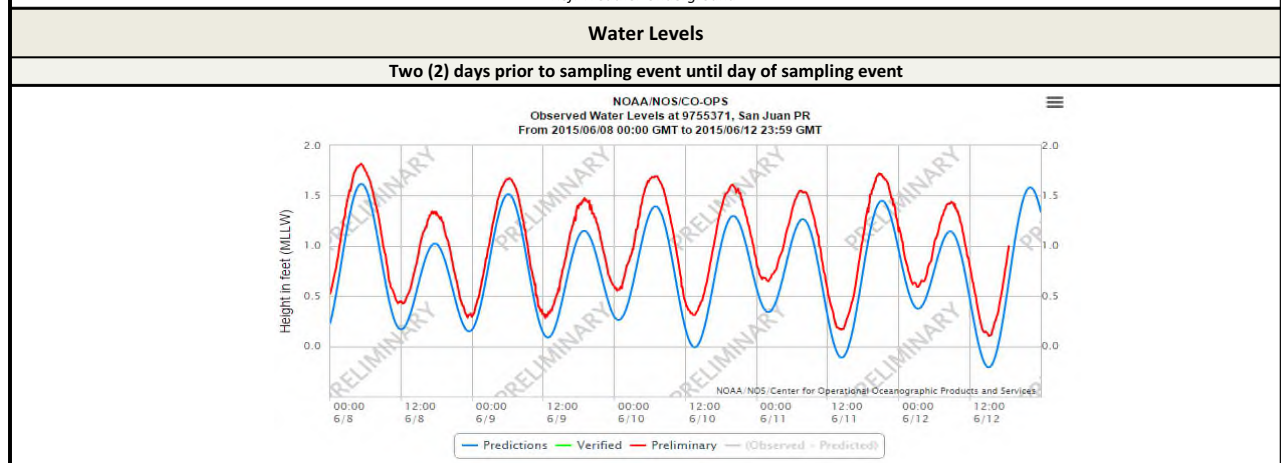


# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 11, 2015

Weather History				
Day of sampling event			Special Comments	
Jueves, Junio 11, 2015				
<div>« Previous Day</div> <div>Next Day »</div>			Some cloudy moments; scattered to moderate precipitation during GW level readings activity.	
<div>DailyWeeklyMonthlyCustom</div>				
	Actual	Average		Record
Temperature				
Temperatura media	28 ° C	28 ° C		
Temperatura máxima	31 ° C	32 ° C		33 ° C [1974]
Temperatura mínima	24 ° C	26 ° C		21 ° C [1959]
Degree Days				
Grados día de calefacción	0	0		
Month to date heating degree days	0	0		
Since 1 June heating degree days	0	0		
Since 1 July heating degree days	0	0		
Cooling Degree Days	17	18		
Month to date cooling degree days	210	198		
Year to date cooling degree days	2551	2363		
Since 1 June cooling degree days	210	198		
Growing Degree Days	32 [Base 50]			
Moisture				
Punto de rocío	24 ° C			
Average Humidity	80			
Maximum Humidity	94			
Minimum Humidity	65			
Precipitación				
Precipitación	3.56 mm	3.56 mm	13.26 mm [1919]	
Month to date precipitation	0.35	1.77		
Year to date precipitation	13.74	20.45		





# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
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<b>Project:</b>	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
<b>Address:</b>	LMMIA	<b>Date:</b>	June 18, 2015

Phone:	787-751-7810	CHES Representative:	CFS	
Time	Location	Activity / Observations		
7:45	MW4	J&S and FLRA at the site. A slight sheen was observed on MW4S.		
7:52	MW4S	GW level readings (Elevation)		
7:54	MWAD	GW level readings (Elevation) was performed.		
7:59	MW2	Arrived for GW level readings.		
8:00	MW2S	A slight sheen was observed on MW2S.		
8:03	MW2	J&S personnel experienced problems with instrument (Portable Water Level Meter).		
8:13	MW2S	GW level readings (Elevation) done.		
8:15	MW2D	GW level readings (Elevation) done.		
8:20	MW1	Arrived for GW level readings.		
8:25	MW1D	Instrument failed. J&S		
8:30	MW1	Due to problems with instrument (Powers Portable Water Level Meter), J&S will bring another equipment to continue readings tomorrow 06/19.		
8:35	MW1	FLRA/J&S teams signed off		
Moving Forward (Next Steps)				
Action Item		Deadline	%Completion	Responsible Party
Continue level readings tomorrow 06/19/15 with J&S		June 19, 2015		FLRA/J&S





# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
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Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 18, 2015

Weather History					Special Comments			
Two (2) days prior to sampling event								
Tuesday, June 16, 2015					N/A			
« Previous Day								
Next Day »								
<table><tr><td>Daily</td><td>Weekly</td><td>Monthly</td><td>Custom</td></tr></table>						Daily	Weekly	Monthly
Daily	Weekly	Monthly	Custom					
<table><tr><td></td><td>Actual</td><td>Average</td><td>Record</td></tr></table>						Actual	Average	Record
	Actual	Average	Record					
Temperature								
Mean Temperature								
Max Temperature								
Min Temperature								
Degree Days								
Heating Degree Days								
Month to date heating degree days								
Since 1 June heating degree days								
Since 1 July heating degree days								
Cooling Degree Days								
Month to date cooling degree days								
Year to date cooling degree days								
Since 1 June cooling degree days								
Growing Degree Days								
Moisture								
Dew Point								
Average Humidity								
Maximum Humidity								
Minimum Humidity								
Precipitation								
Precipitation								
Month to date precipitation								
Year to date precipitation								
Ref: Weather Underground								

Weather History					Special Comments			
One (1) day prior to sampling event								
Wednesday, June 17, 2015					N/A			
« Previous Day								
Next Day »								
<table><tr><td>Daily</td><td>Weekly</td><td>Monthly</td><td>Custom</td></tr></table>						Daily	Weekly	Monthly
Daily	Weekly	Monthly	Custom					
<table><tr><td></td><td>Actual</td><td>Average</td><td>Record</td></tr></table>						Actual	Average	Record
	Actual	Average	Record					
Temperature								
Mean Temperature								
Max Temperature								
Min Temperature								
Degree Days								
Heating Degree Days								
Month to date heating degree days								
Since 1 June heating degree days								
Since 1 July heating degree days								
Cooling Degree Days								
Month to date cooling degree days								
Year to date cooling degree days								
Since 1 June cooling degree days								
Growing Degree Days								
Moisture								
Dew Point								
Average Humidity								
Maximum Humidity								
Minimum Humidity								
Precipitation								
Precipitation								
Month to date precipitation								
Year to date precipitation								
Ref: Weather Underground								



# Daily Activities

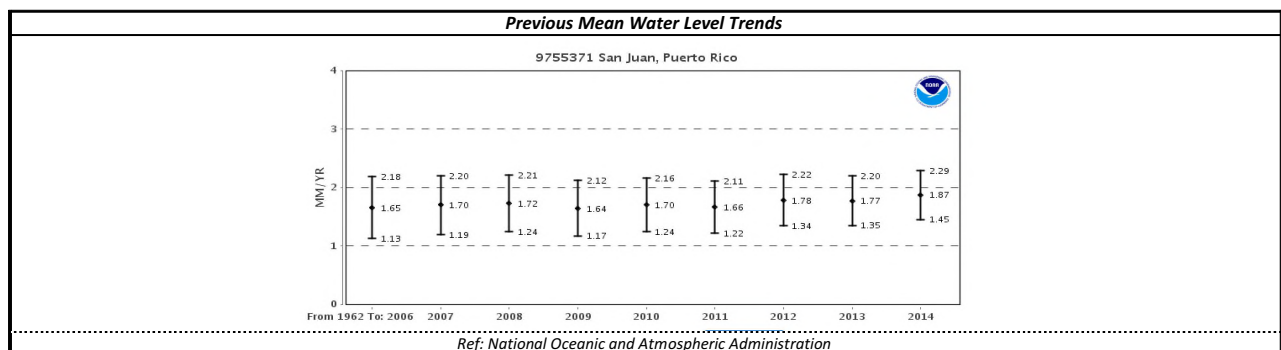
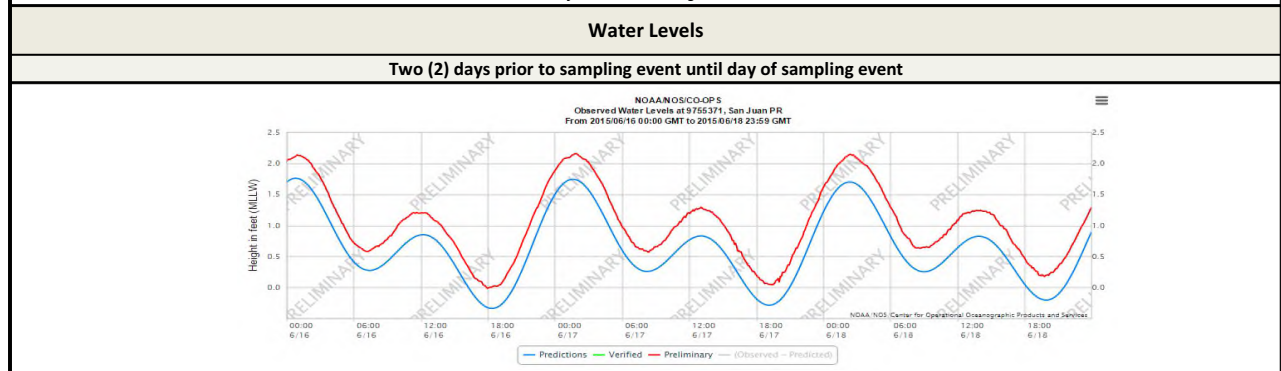
Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 18, 2015

Weather History			
Day of sampling event			Special Comments
Thursday, June 18, 2015			
« Previous Day		Next Day »	
Daily	Weekly	Monthly	Custom
	Actual	Average	Record
Temperature			
Mean Temperature	29 °C	28 °C	
Max Temperature	32 °C	32 °C	34 °C (1983)
Min Temperature	26 °C	26 °C	20 °C (1909)
Degree Days			
Heating Degree Days	0	0	
Month to date heating degree days	0	0	
Since 1 June heating degree days	0	0	
Since 1 July heating degree days	0	0	
Cooling Degree Days	19	18	
Month to date cooling degree days	343	324	
Year to date cooling degree days	2684	2489	
Since 1 June cooling degree days	343	324	
Growing Degree Days	34 (Base 50)		
Moisture			
Dew Point	26 °C		
Average Humidity	82		
Maximum Humidity	94		
Minimum Humidity	70		
Precipitation			
Precipitation	0.00 mm	3.56 mm	5.89 mm (1949)
Month to date precipitation	1.06	2.78	
Year to date precipitation	14.45	21.46	
			N/A

N/A

Ref: Weather Underground



Ref: National Oceanic and Atmospheric Administration



# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
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<b>Project:</b>	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
<b>Address:</b>	LMMIA	<b>Date:</b>	June 19, 2015

Phone:	787-751-7810		CHES Representative:	CFS		
Time	Location	Activity / Observations				
7:35	CAF1	FLRA arrived				
8:00		J&S arrived				
8:03	MW1	Arrival @ MW1.				
8:40	MW8	Arrival @ MW8. GW level readings done at MW8S & MW8D.				
9:10	MW3	Arrival @ MW3. GW level readings done at MW3S & MW3D.				
9:20	MW5	Arrival @ MW5. GW level readings done at MW5S & MW5D.				
9:31	MW6	Arrival @ MW6. GW level readings done at MW6S & MW6D.				
9:42	MW7	Arrival @ MW7. GW level readings done at MW7S & MW7D.				
9:57	MW9	Arrival @ MW9. GW level readings done at MW9S & MW9D.				
10:08	MW10	Arrival @ MW10. GW level readings done at MW10S & MW10D.				
10:24	MW11	Arrival @ MW11. GW level readings done at MW11S & MW11D.				
10:40		All GW level readings done.				
11:00		FLRA/J&S teams signed off				
Moving Forward (Next Steps)						
Action Item			Deadline		%Completion	Responsible Party
Coordinate following week's work.			June 24, 2015		25%	FLRA/J&S



# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

<b>Project:</b>	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
<b>Address:</b>	LMMIA	<b>Date:</b>	June 19, 2015

Weather History				Special Comments
Two (2) days prior to sampling event				
Wednesday, June 17, 2015				N/A
« Previous Day				
Next Day »				
Daily	Weekly	Monthly	Custom	
Actual				
Average				
Record				
Temperature				
Mean Temperature	28 °C	28 °C		
Max Temperature	30 °C	32 °C	34 °C [2005]	
Min Temperature	26 °C	26 °C	21 °C [1960]	
Degree Days				
Heating Degree Days	0	0		
Month to date heating degree days	0	0		
Since 1 June heating degree days	0	0		
Since 1 July heating degree days	0	0		
Cooling Degree Days	18	18		
Month to date cooling degree days	324	306		
Year to date cooling degree days	2665	2471		
Since 1 June cooling degree days	324	306		
Growing Degree Days	32 [Base 50]			
Moisture				
Dew Point	26 °C			
Average Humidity	86			
Maximum Humidity	94			
Minimum Humidity	77			
Precipitation				
Precipitation	1.27 mm	3.81 mm	62.23 mm [1960]	
Month to date precipitation	1.06	2.64		
Year to date precipitation	14.45	21.32		
Ref: Weather Underground				

Weather History				Special Comments
One (1) day prior to sampling event				
Thursday, June 18, 2015				N/A
« Previous Day				
Next Day »				
Daily	Weekly	Monthly	Custom	
Actual				
Average				
Record				
Temperature				
Mean Temperature				
29 °C				
28 °C				
Max Temperature				
32 °C				
32 °C				
34 °C (1983)				
Min Temperature				
26 °C				
26 °C				
20 °C (1909)				
Degree Days				
Heating Degree Days				
0				
0				
Month to date heating degree days				
0				
0				
Since 1 June heating degree days				
0				
0				
Since 1 July heating degree days				
Cooling Degree Days				
19				
18				
Month to date cooling degree days				
343				
324				
Year to date cooling degree days				
2684				
2489				
Since 1 June cooling degree days				
343				
324				
Growing Degree Days				
34 (Base 50)				
Moisture				
Dew Point				
26 °C				
Average Humidity				
82				
Maximum Humidity				
94				
Minimum Humidity				
70				
Precipitation				
Precipitation				
0.00 mm				
3.56 mm				
5.89 mm (1949)				
Month to date precipitation				
1.06				
2.78				
Year to date precipitation				
14.45				
21.46				

Ref: Weather Underground

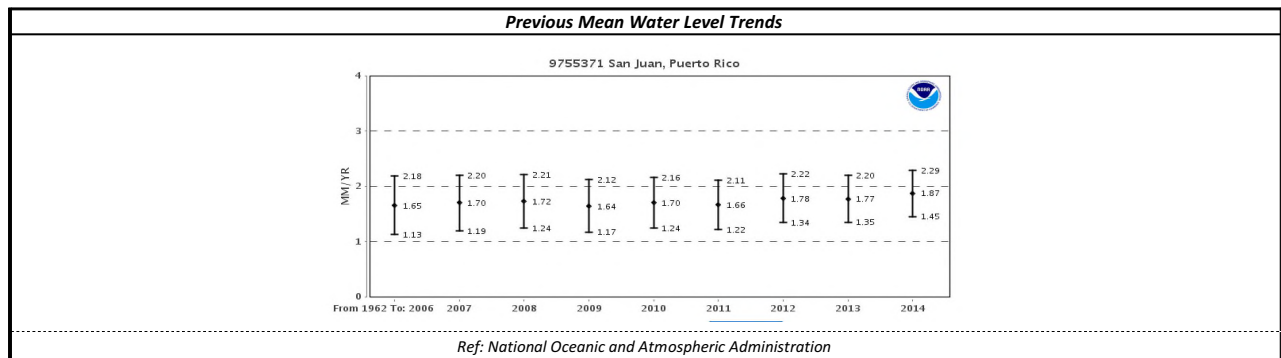
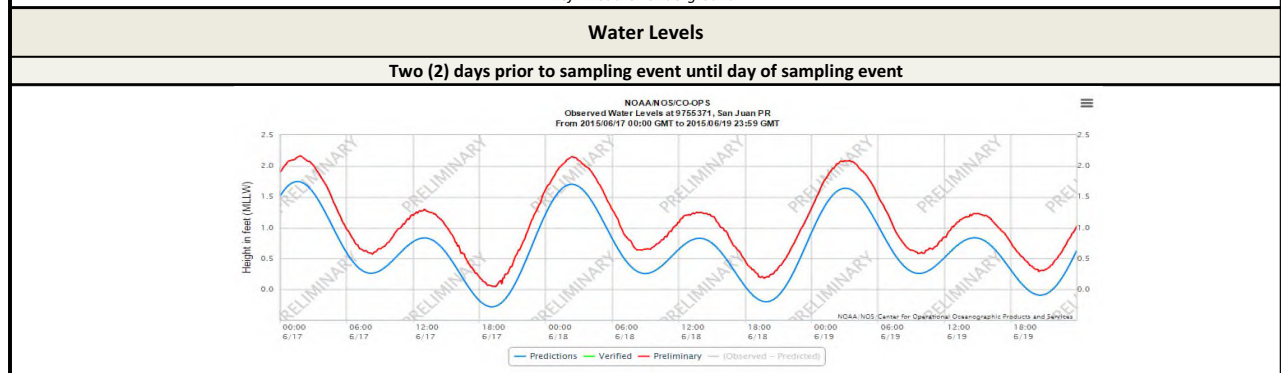


# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flrachess.com](http://www.flrachess.com)

Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 19, 2015

Weather History			
Day of sampling event			Special Comments
Friday, June 19, 2015			
« Previous Day		Next Day »	
Daily	Weekly	Monthly	Custom
	Actual	Average	Record
Temperature			
Mean Temperature	29 °C	28 °C	
Max Temperature	33 °C	32 °C	34 °C [1981]
Min Temperature	26 °C	26 °C	18 °C [1909]
Degree Days			
Heating Degree Days	0	0	
Month to date heating degree days	0	0	
Since 1 June heating degree days	0	0	
Since 1 July heating degree days	0	0	
Cooling Degree Days	20	18	
Month to date cooling degree days	363	342	
Year to date cooling degree days	2704	2507	
Since 1 June cooling degree days	363	342	
Growing Degree Days	35 [Base 50]		
Moisture			
Dew Point	24 °C		
Average Humidity	75		
Maximum Humidity	91		
Minimum Humidity	59		
Precipitation			
Precipitation	0.00 mm	3.56 mm	4.55 mm [2010]
Month to date precipitation	1.06	2.92	
Year to date precipitation	14.45	21.60	
N/A			





# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

<b>Project:</b>	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
<b>Address:</b>	LMMIA	<b>Date:</b>	June 25, 2015

<b>Phone:</b>	787-751-7810	<b>CHES Representative:</b>	CFS/NDM
<b>Time</b>	<b>Location</b>	<b>Activity / Observations</b>	
7:45	CAF1	FLRA arrived	
8:10	CAF1	J&S arrived on site. J&S team brought authorized vehicle to access "Ramp Area".	
8:22	MW4	Arrived for GW level readings.	
8:26	MW4	Done	
8:28	MW2	Arrived for GW level readings.	
8:30	MW2	Done	
8:31	MW1	Arrived for GW level readings.	
8:35	MW1	Done	
8:53	MW5	Arrival @ MW5. GW level readings done at MW5S & MW5D.	
8:58	MW7	Arrived for GW level readings. Stormwater accumulation was observed in MW7D casing.	
9:02	MW7	Done	
9:03	MW7	Carmen Figueroa arrived to site.	
9:05	MW9	Arrived for GW level readings.	
9:08	MW9	Done	
9:10	MW10	Arrival @ MW10. GW level readings done at MW10S & MW10D.	
9:15	MW11	Arrived for GW level readings.	
9:17	MW11	Done	
9:23	MW6	Arrived for GW level readings.	
9:24	MW6	Done	
9:24	MW3	Arrived for GW level readings.	
9:30	MW3	Done	
9:41	MW8	Arrived for GW level readings.	
9:45	MW8	Done	
9:50	CAF1	J&S team signed off.	
9:55	CAF1	FLRA team received from ELLE (contracted laboratory) cooler 1 of 2 with sampling supplies. An inventory of supplies was performed, all items received were in good conditions. (materials received: 100 HCl vials, 1 Temp. bottle).	
10:15	CAF1	FLRA team signed off.	

## Moving Forward (Next Steps)

<b>Action Item</b>	<b>Deadline</b>	<b>%Completion</b>	<b>Responsible Party</b>
Coordinate following week's work.	July 2, 2015	25%	FLRA/J&S





# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 25, 2015

Weather History					Special Comments
Two (2) days prior to sampling event					
Tuesday, June 23, 2015					N/A
<a href="#">« Previous Day</a> <a href="#">Next Day »</a>					
<div><div>Daily</div><div>Weekly</div><div>Monthly</div><div>Custom</div></div>					
ActualAverageRecord					
Temperature					
Mean Temperature					
29 °C					
29 °C					
Max Temperature					
32 °C					
32 °C					
36 °C (1983)					
Min Temperature					
26 °C					
26 °C					
21 °C (1961)					
Degree Days					
Heating Degree Days					
0					
0					
Month to date heating degree days					
0					
Since 1 June heating degree days					
0					
Since 1 July heating degree days					
0					
Cooling Degree Days					
20					
18					
Month to date cooling degree days					
439					
414					
Year to date cooling degree days					
2780					
2579					
Since 1 June cooling degree days					
439					
414					
Growing Degree Days					
34 (Base 50)					
Moisture					
Dew Point					
24 °C					
Average Humidity					
77					
Maximum Humidity					
91					
Minimum Humidity					
63					
Precipitation					
Precipitation					
T mm					
3.56 mm					
5.64 mm (1927)					
Month to date precipitation					
1.33					
3.46					
Year to date precipitation					
14.72					
22.14					
Ref: Weather Underground					
Weather History					Special Comments
One (1) day prior to sampling event					
Wednesday, June 24, 2015					N/A
<a href="#">« Previous Day</a> <a href="#">Next Day »</a>					
<div><div>Daily</div><div>Weekly</div><div>Monthly</div><div>Custom</div></div>					
ActualAverageRecord					
Temperature					
Mean Temperature					
29 °C					
29 °C					
Max Temperature					
33 °C					
32 °C					
35 °C (1983)					
Min Temperature					
26 °C					
26 °C					
21 °C (1951)					
Degree Days					
Heating Degree Days					
0					
0					
Month to date heating degree days					
0					
Since 1 June heating degree days					
0					
Since 1 July heating degree days					
0					
Cooling Degree Days					
20					
18					
Month to date cooling degree days					
459					
432					
Year to date cooling degree days					
2800					
2597					
Since 1 June cooling degree days					
459					
432					
Growing Degree Days					
34 (Base 50)					
Moisture					
Dew Point					
23 °C					
Average Humidity					
74					
Maximum Humidity					
91					
Minimum Humidity					
56					
Precipitation					
Precipitation					
1.02 mm					
3.56 mm					
6.02 mm (2013)					
Month to date precipitation					
1.37					
3.60					
Year to date precipitation					
14.76					
22.28					
Ref: Weather Underground					



# Daily Activities

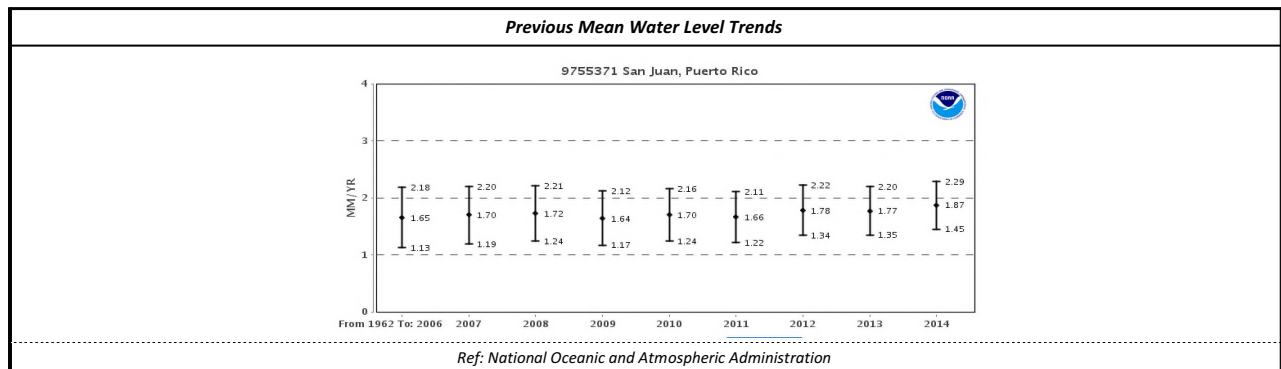
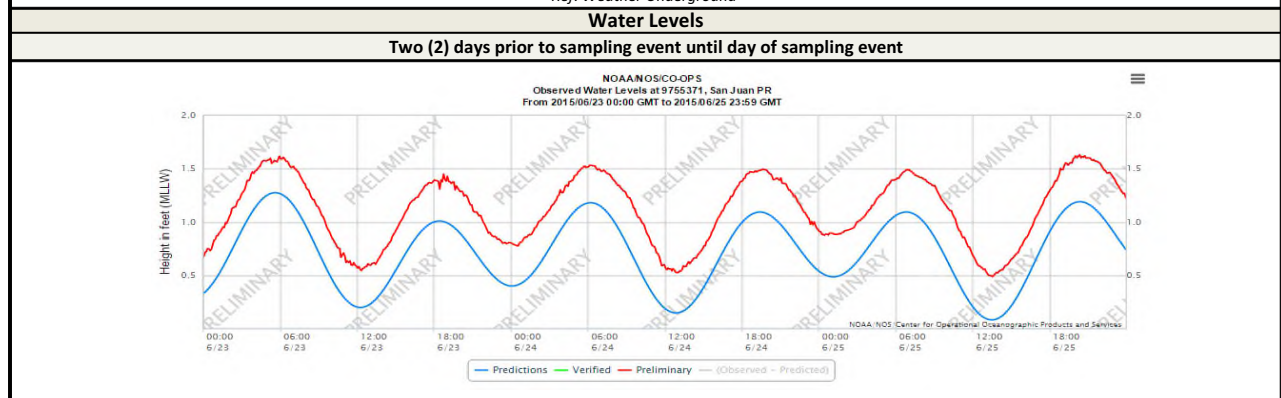
Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associates  
Chemical/Environmental Engineering & Industrial Hygiene Consultants  
[www.flraches.com](http://www.flraches.com)

Project:	CAF MW Weekly Groundwater Levels Reading Event (Weekly for the first three months)		
Address:	LMMIA	Date:	June 25, 2015

Weather History			
Day of sampling event			Special Comments
Thursday, June 25, 2015			
« Previous Day		Next Day »	
Daily	Weekly	Monthly	Custom
	Actual	Average	Record
Temperature			
Mean Temperature	28 °C	29 °C	
Max Temperature	31 °C	32 °C	36 °C [1983]
Min Temperature	26 °C	26 °C	21 °C [1955]
Degree Days			
Heating Degree Days	0	0	
Month to date heating degree days		0	
Since 1 June heating degree days		0	
Since 1 July heating degree days		0	
Cooling Degree Days	18	18	
Month to date cooling degree days		450	
Year to date cooling degree days		2615	
Since 1 June cooling degree days		450	
Growing Degree Days	34 (Base 50)		
Moisture			
Dew Point	23 °C		
Average Humidity	73		
Maximum Humidity	82		
Minimum Humidity	55		
Precipitation			
Precipitation	0.0 mm	3.30 mm	4.22 mm [1934]
Month to date precipitation		3.73	
Year to date precipitation		22.41	
N/A			

N/A

Ref: Weather Underground





# Daily Activities

Prepared by: CHES Services Corp. d/b/a: Fernando L. Rodríguez, PE & Associate.  
Chemical/Environmental Engineering & Industrial Hygiene Consultant:  
[www.flraches.com](http://www.flraches.com)

<b>Project:</b>	CAF Groundwater Monitoring Wells		
<b>Address:</b>	LMMIA	<b>Date:</b>	June-15

## Weather History

### Climatological Data for SAN JUAN L M MARIN AP, PR - June 2015

Click column heading to sort ascending, click again to sort descending.

Date	Temperature				HDD	CDD	Precipitation	New Snow	Snow Depth
	Maximum	Minimum	Average	Departure					
2015-06-01	89	78	83.5	0.7	0	19	0.00	0.0	0
2015-06-02	87	78	82.5	-0.4	0	18	0.10	0.0	0
2015-06-03	88	77	82.5	-0.4	0	18	0.07	0.0	0
2015-06-04	90	77	83.5	0.5	0	19	0.00	0.0	0
2015-06-05	94	78	86.0	3.0	0	21	0.00	0.0	0
2015-06-06	92	78	85.0	1.9	0	20	0.00	0.0	0
2015-06-07	93	78	85.5	2.4	0	21	0.00	0.0	0
2015-06-08	92	77	84.5	1.3	0	20	0.00	0.0	0
2015-06-09	89	79	84.0	0.8	0	19	0.00	0.0	0
2015-06-10	88	78	83.0	-0.2	0	18	0.04	0.0	0
2015-06-11	88	76	82.0	-1.3	0	17	0.14	0.0	0
2015-06-12	90	76	83.0	-0.3	0	18	0.64	0.0	0
2015-06-13	92	79	85.5	2.2	0	21	0.02	0.0	0
2015-06-14	92	78	85.0	1.6	0	20	T	0.0	0
2015-06-15	89	78	83.5	0.1	0	19	0.00	0.0	0
2015-06-16	89	77	83.0	-0.4	0	18	0.00	M	M
2015-06-17	86	79	82.5	-0.9	0	18	0.05	0.0	0
2015-06-18	89	79	84.0	0.6	0	19	0.00	0.0	0
2015-06-19	91	79	85.0	1.6	0	20	0.00	0.0	0
2015-06-20	89	79	84.0	0.5	0	19	0.00	0.0	0
2015-06-21	90	78	84.0	0.5	0	19	0.06	0.0	0
2015-06-22	89	76	82.5	-1.0	0	18	0.21	0.0	0
2015-06-23	90	79	84.5	1.0	0	20	T	0.0	0
2015-06-24	91	78	84.5	1.0	0	20	0.04	0.0	0
2015-06-25	90	79	84.5	1.0	0	20	0.02	0.0	0
2015-06-26	91	77	84.0	0.5	0	19	0.20	0.0	0
2015-06-27	91	78	84.5	1.0	0	20	0.09	0.0	0
2015-06-28	91	79	85.0	1.5	0	20	0.02	0.0	0
2015-06-29	90	80	85.0	1.5	0	20	0.00	0.0	0
2015-06-30	85	77	81.0	-2.5	0	16	0.41	0.0	0
<b>Sum</b>	2695	2339	-	-	0	574	2.11	0.0	-
<b>Average</b>	89.8	78.0	83.9	0.6	-	-	-	-	0.0
<b>Normal</b>	88.9	77.7	83.3	-	0	549	4.41	0.0	-

Ref: NOAA NWSF; NOWData - NOAA Online Weather Data; San Juan LMMIA Station



# First Bimonthly Report

Groundwater Monitoring Wells at the Luis Muñoz Marín International  
Airport (LMMIA)

## 2.0 GROUNDWATER LEVELS DATABASE

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The following groundwater levels database includes data corresponding to the twenty-two (22) wells installed at the LMMIA.



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### Groundwater Monitoring Wells Construction and Sampling Project

Weekly GW Level Readings [First Bi-monthly Reprt]

GW Level Monitoring Start: May 18, 2015

GW Level Monitoring Projected End: June 25, 2015

Well ID		MW1S	MW1D	MW2S	MW2D	MW3S	MW3D	MW4S	MW4D	MW5S	MW5D	MW6S	MW6D	MW7S	MW7D	MW8S	MW8D	MW9S	MW9D	MW10S	MW10D	MW11S	MW11D
Well depth			20.5'	10'	20'		20'		20' 5"		20'		20.5'		20.5'	10'	20.5'		20.5'		20.5'		23.5'
Week of	Date																						
May 18, 2015	May 18, 2015	6' 3"	6' 4"	4' 7"	4' 4"	-	-	3' 5"	2' 8"	6' 9"	8' 6"	-	-	-	-	-	-	-	-	-	-	-	-
May 18, 2015	May 19, 2015	-	-	-	-	-	-	-	-	-	-	6' 3"	6' 4"	6'	6' 6"	-	-	6'	13'	6' 9"	6' 9"	6' 3"	9'
May 18, 2015	May 20, 2015	-	-	-	-	6' 4"	6' 5"	-	-	-	-	-	-	-	2' 8"	3'	3'	7'	7' 7"	-	-	7' 4"	7' 4"
May 25, 2015	May 28, 2015	6'	6'	4' 1"	4'	6' 5"	6' 6"	2' 11"	2' 11"	NR	6' 10"	5' 10"	6' 6"	5' 11"	6' 11"	3'	3' 1"	6' 11"	7' 2"	6' 6"	6' 8"	7' 2"	7'
June 1, 2015	June 4, 2015	6' 3"	6' 5"	4'	3' 6"	6' 3"	6' 2"	3'	3'	6'	6' 8"	5' 6"	6'	5' 8"	6' 1"	2' 8"	2' 2"	5' 6"	7'	6' 3"	6' 3"	6' 7"	7'
June 8, 2015	June 11, 2015	5' 9"	5' 11"	4' 1"	3' 10"	7'	7'	3'	3' 3"	6' 11"	7' 1"	6' 3"	6' 6"	6' 1"	4' 3"	2' 11"	3' 6"	6' 6"	7' 1"	7'	6' 10"	7' 3"	7' 6"
June 15, 2015	June 18, 2015	-	-	4'	3' 6"	-	-	3' 2"	2' 11"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
June 15, 2015	June 19, 2015	5' 10"	5' 7"	-	-	6' 4"	6' 3"	-	-	6' 11"	6' 5"	5' 6"	6'	5' 7"	4' 1"	2' 11"	3'	5' 11"	6' 6"	6' 4"	6' 4"	7'	7'
June 22, 2015	June 25, 2015	6'	6' 4"	4' 4"	4' 1"	6' 9"	6' 10"	3' 4"	3' 3"	6' 9"	6' 11"	6' 2"	6' 4"	6' 1"	5'	3'	3' 4"	5' 10"	6' 7"	6' 10"	6' 9"	7' 6"	7' 5"



# First Bimonthly Report

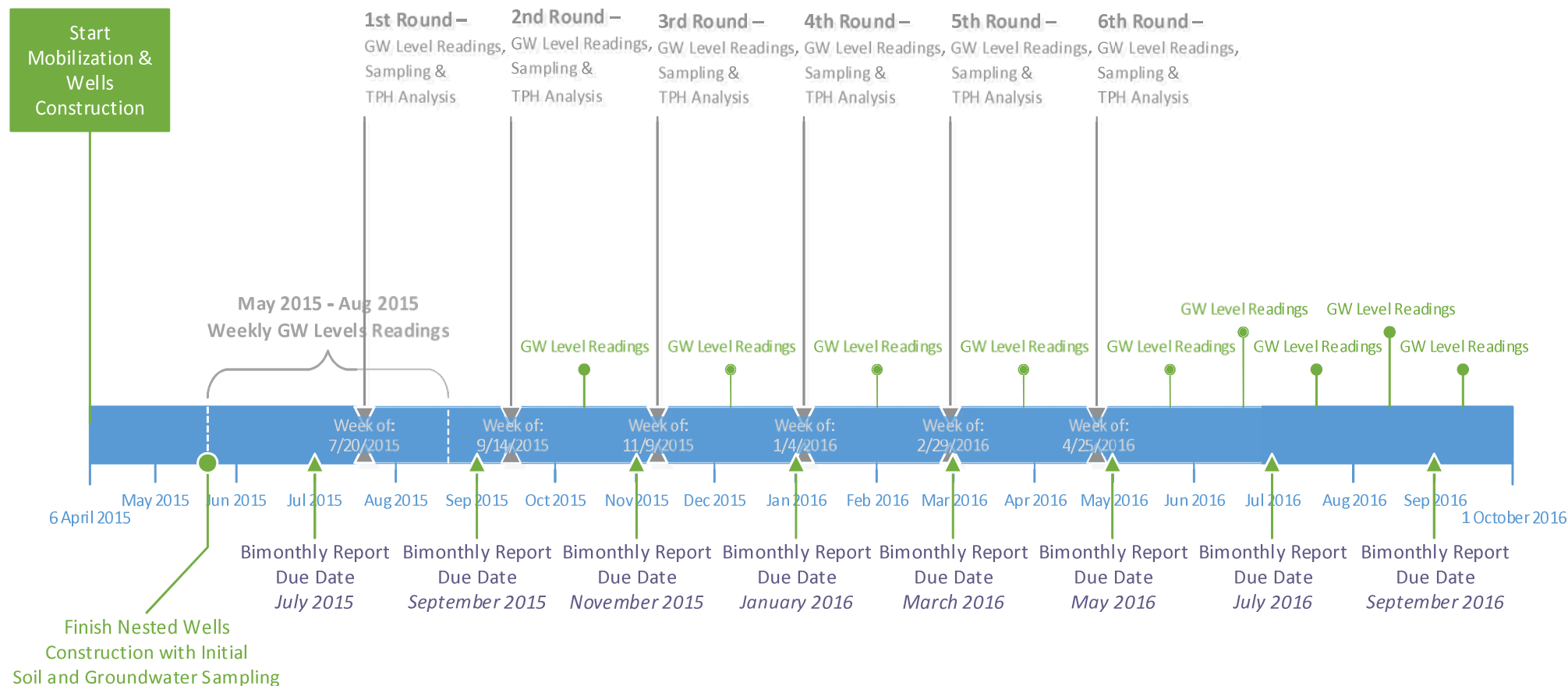
Groundwater Monitoring Wells at the Luis Muñoz Marín International  
Airport (LMMIA)

## **3.0 PROJECT PROGRESS AND/OR PROPOSED SCHEDULE**

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The following pages provide project progress details and an updated proposed schedule for the tasks agreed upon with U.S. EPA.





Rev.: June 3, 2015

TITLE

**Caribbean Airport Facilities, Inc.**  
**LMMIA, Carolina, PR**  
**Eleven (11) Nested Groundwater Monitoring Wells**  
**Construction with Bimonthly**  
**Sampling/Analysis Timeline**

#### Notes:

1. During the months of April and May 2015, groundwater (GW) and soil samples were collected at each one of the nested wells as they were constructed.
2. The following 3-month period, on a weekly basis, GW levels (shallow and deep) are being logged, and monthly thereafter.
3. After the initial sampling, the nested wells are to be sampled and samples to be analyzed for TPH analysis by the designated laboratory on a bimonthly basis (every 2 months) for the first year.

*M. LaReau (EPA): After sampling and water level measurements have commenced, CAF can make a recommendation based on the data to alter this schedule. At that time, EPA will review all documents presented to determine if a change is warranted.*



# First Bimonthly Report

Groundwater Monitoring Wells at the Luis Muñoz Marín International  
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## 4.0 REFERENCES

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- 1 Weather Underground. Historical Weather. [Internet]. 2015 Available from:  
<http://www.wunderground.com/history/>.
- 2 Center for Operational Oceanographic Products and Services. Observed Tides/Water Levels  
at 9755371, San Juan, PR. [Internet]. Available from:  
<http://tidesandcurrents.noaa.gov/waterlevels.html>.